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Enrollment and Academic Outcomes of English Language Learners in Pre-K to Grade 3 in the Boston Public Schools, SY2009: Data Points for a Discussion at Wheelock College

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Enrollment and Academic Outcomes of English Language Learners in Pre-K to Grade 3 in the Boston Public Schools, SY2009: Data Points for a Discussion at Wheelock College

This brief report focuses on the enrollment, characteristics and academic outcomes of English Language Learners in Pre-Kindergarten to Grade 3 in comparison with those of English proficient students and all students at these grade levels.¹ The purpose of the report is to generate discussion about ways in which the learning needs of these students can best be met. As proposed, the report consists primarily of data tables and annotations organized around five sets of questions. These are:

- 1. What is the enrollment of ELLs in Grades Pre-K to 3 in the Boston Public Schools?*
- 2. What are the individual characteristics of ELLs in Grades PK to 3? How do these compare with those of English proficient students in BPS? What are the characteristics of ELLs from different language groups?*
- 3. What are the characteristics of schools and programs in which PK-3 ELLs are enrolled? Is there a difference between the pattern of enrollment of ELLs and that of English proficient students?*
- 4. What are the pass rates of ELLs in the Grade 3 ELA and Math tests of the Massachusetts Comprehensive Assessment System (MCAS)? How did these rates change between SY2006 and SY2011?*
- 5. What are the Grade 3 MCAS ELA and Math pass rates of ELLs*
 - at different levels of English proficiency?*
 - of different demographic characteristics?*
 - in different types of programs?*

Data for this report were provided by the Boston Public Schools as part of the collaboration between BPS' Office of English Language Learners, the Gastón Institute at UMass Boston and the Center for Collaborative Education for the project Identifying Success in Schools and Programs for English Language Learners in Boston Public Schools (Miren Uriarte and Rosann Tung, Principal Investigators). The full results of this research are available at <http://www.umb.edu/gastoninstitute>.

In this report, the terms "English Language Learners" and "students of limited English proficiency" and their acronyms ("ELLs" and "LEP students") are used interchangeably. The definitions of all variables used in the tables in this report appear in Appendix 1.

I. What is the enrollment of ELLs in Pre-K to Grade 3 in the Boston Public Schools?

Among the 19,708 students in Pre-K to Grade 3 in the Boston Public Schools in SY2009,

- 12,208 or 61.9% were native English speakers and 7,500 or 38.1% were native speakers of a language other than English
- 26.2% (5,159) had been determined to be English Language Learners (ELLs or LEPs) and 73.8% (14,549) were students who were English proficient (EP).
- Among those who were English proficient in SY2009, 16.1% were students whose first language is not English.

Table 1. Enrollment Defined by Native Language and English Language Proficiency, Grades Pre-K to 3. BPS, SY2009

Total	All BPS PK-3 (19,708)			
Native Language	Native English Speaker (NES) (12,208)		Native Speakers of Other Languages (NSOL) (7,500)	
Language Proficiency	English Proficient (EP) (14,549)			Limited English Proficient (LEP) (5,159)
	NES (12,208)	NSOL-EP (2,326)	FLEP (15)	

Changes in Enrollment between SY2006 and SY2009 in the Boston Public Schools

Overall enrollment in BPS decreased by 3.9% between SY2006 and SY2009, a pattern which repeated itself among English proficient students, among whom enrollment declined by 7.3%. In contrast, the overall enrollment of ELLs increased by 12.3% between those school years (Uriarte et al., 2011).

Among students in Pre-K through Grade 3, we observe a different pattern of enrollment change: in these grades, all groups increased their enrollment but ELLs showed the slowest growth. Table 2 shows that the overall enrollment of students in Grades Pre-K to 3 increased by 3.6% between SY2006 and SY2009 and that English proficient students increased by 4% in the same period. While LEP enrollment also increased, the growth of 2.4% between SY2006 and 2009 was smallest observed.

Table 2 also presents the comparison in the change in enrollment between the younger PK students and those in K-3 in the same period. Among the PK students, enrollments increased briskly across all groups, with the slowest change occurring among LEP students. By way of contrast, the enrollments among all K-3 students declined and LEP students showed the sharpest decline.

Table 3 shows the comparison in the change in enrollment of all BPS, EP, and LEP students at different grade levels. The rate of growth among LEPs in Pre-K to Grade 3 in this period is lower than among LEPs in other grade spans in BPS.

Table 2. Enrollment of Student Populations Defined by English Language Proficiency, Grades PK-3. BPS, SY2006-SY2011

	SY2006		SY2007		SY2008		SY2009		% Change SY2006-09
	N	%	N	%	N	%	N	%	
	All PK-3								
All BPS	19,022	100%	19,044	100%	19,499	100%	19,708	100%	3.6%
All English Proficient	13,985	73.5%	14,326	75.2%	14,559	74.7%	14,549	73.8%	4.0%
LEP	5,037	26.5%	4,718	24.8%	4,940	25.3%	5,159	26.2%	2.4%
	PK								
All BPS	1,738	100%	2036	100%	2,539	100%	2,649	100%	52.4%
All English Proficient	1,256	72.3%	1,523	74.8%	1,859	73.2%	1,932	72.9%	53.8%
LEP	482	27.7%	513	25.2%	680	26.8%	717	27.1%	48.8%
	K-3								
All BPS	17,284	100%	17,008	100%	16,960	100%	17,059	100%	-1.3%
All English Proficient	12,729	73.6%	12,803	75.3%	12,700	74.9%	12,617	74.0%	-0.9%
LEP	4,555	26.4%	4,205	24.7%	4,260	25.1%	4,442	26.0%	-2.5%
Note: Data for SY2006-SY2009 include any student enrolled during the school year, based on both October and June SIMS.									

Table 3. Enrollment of Student Populations Defined by English Language Proficiency. BPS, SY2006-SY2009

	Pre-K-3	Gr 4-5	Gr 6-8	Gr 9-12
	Change between SY2006-2009			
All BPS	3.6%	-3.8%	-12.0%	-6.0%
All English Proficient	4.0%	-7.9%	-18.7%	-8.3%
LEP	2.4%	15.5%	51.1%	10.2%

II. What are the individual characteristics of ELLs in Grades PK to 3? How do these compare with those of English proficient students in BPS? Among ELLs, what are the characteristics of students from different language groups?

Tables 4, 5, and 6 present the individual characteristics of BPS students, English proficient and LEP students, first as a whole and disaggregating those in Pre-kindergarten and those in Kindergarten to Grade 3. The individual characteristics used in this comparison include gender, income status, race, native language, mobility and designation as a student with disabilities (SWD).

ELLs in these lower grades show higher proportion of students in poverty (89.9%) and of non-white students (95.4%) than English proficient students in these grades. Higher proportions of low income and of students of color are also found among PK and among K-3 students. The differences are particularly salient among students in K-3 grades.

The majority of ELLs in Grades PK-3 are native Spanish speakers (57.8%), with Chinese (8.2%) and Vietnamese (8.0%) being the next most frequent languages spoken by this group.

Table 4. Characteristics of Student Enrollment, Grades PK-3. BPS, SY2009

	All BPS	EP ⁵	LEP ⁵
Total Enrollment	19,708	14,549	5,159
Male	52.5%	52.8%	51.6%
Low-income ¹	78.9%	75.0%	89.9%
Race ²			
Asian	7.6%	4.3%	17.2%
Black	33.8%	40.9%	13.6%
Latino	43.1%	35.9%	63.5%
White	12.7%	15.6%	4.6%
Other	2.9%	3.4%	1.0%
Native Language			
English	61.9%	83.9%	NA
Spanish	21.8%	9.1%	57.8%
Chinese dialects	2.9%	1.0%	8.2%
Vietnamese	3.1%	1.3%	8.0%
Haitian Creole	2.7%	1.4%	6.2%
Cape Verdean Creole	1.8%	0.8%	4.5%
Portuguese	1.0%	0.5%	2.4%
Somali	0.8%	0.5%	1.7%
Other	4.0%	1.5%	11.2%
Mobile ³	10.1%	10.3%	9.5%
SWD ⁴	17.5%	18.7%	14.0%
Note: ¹ Low-income is defined as eligible for free or reduced price lunch. ² Asian, Black, white and other races do not include students who identified themselves as Latino. ³ Proportion of students who changed schools during the school year. ⁴ SWD includes Grades K-3 only. ⁵ Comparing EP and LEP students, differences in student characteristics were statistically significant in terms of: income (p=.000, small effect size); race/ethnicity (p=.000, medium effect size); native language (p=.000, large effect size); and disability (p=.000, minimal effect size).			

Overall, the key differences between students who are EPs and those who are LEPs are that LEPs have a slightly lower proportion of males than EPs, higher proportions of low-income students, higher proportions of Latino and Asian students, lower rates of mobility, and lower proportions of students with disabilities. The differences in income, race/ethnicity, native language, and disability proved statistically significant between LEPs and EP students in the overall group of PK-Grade 3 and among K-3 students. Among those in Pre-Kindergarten, differences in gender and mobility also proved significant.

Table 5. Characteristics of Student Enrollment, Grade PK. BPS, SY2009

	All BPS	EP ⁵	LEP ⁵
Total Enrollment	2,649	1,932	717
Male	55.3%	56.9%	50.9%
Low-income ¹	69.8%	63.9%	85.8%
Race ²			
Asian	9.6%	5.1%	21.6%
Black	32.2%	39.7%	12.1%
Latino	39.6%	32.1%	59.8%
White	15.6%	19.5%	5.3%
Other	2.9%	3.6%	1.1%
Native Language			
English	59.2%	81.2%	NA
Spanish	21.1%	9.3%	53.0%
Chinese dialects	2.8%	0.8%	8.2%
Vietnamese	5.1%	2.1%	13.1%
Haitian Creole	3.0%	2.1%	5.6%
Cape Verdean Creole	2.1%	1.0%	4.9%
Portuguese	1.0%	0.4% ⁵	2.6%
Somali	0.6%	1.0% ⁵	0.6% ⁵
Other ³	5.0%	2.6%	11.6%
Mobile ⁴	16.4%	18.3%	11.4%

Note: ¹ Low-income is defined as eligible for free or reduced price lunch. ² Asian, Black, white and other races do not include students who identified themselves as Latino. ³ The most frequently spoken native language among the "other" category for LEP students in PK is Arabic. There are more native Arabic speakers among LEPs in PK than native Somali speakers.

⁴ Proportion of students who changed schools during the school year. ⁵ Represents n<10.

⁶ Comparing EP and LEP students, differences in student characteristics were statistically significant in terms of: gender (p=.006, minimal effect size); income (p=.000, small effect size); race/ethnicity (p=.000, medium effect size); native language (p=.003, small effect size); and mobility (p=.000, minimal effect size).

Table 6. Characteristics of Student Enrollment, K-3. BPS, SY2009

	All BPS	EP ⁵	LEP ⁵
Total Enrollment	17,059	12,617	4,442
Male	52.1%	52.2%	51.7%
Low-income ¹	80.3%	76.7%	90.6%
Race ²			
Asian	7.3%	4.1%	16.5%
Black	34.0%	41.1%	13.9%
Latino	43.6%	36.4%	64.1%
White	12.2%	15.0%	4.4%
Other	2.8%	3.4%	1.1%
Native Language			
English	62.4%	84.3%	NA
Spanish	21.9%	9.0%	58.6%
Chinese dialects	2.9%	1.0%	8.2%
Vietnamese	2.8%	1.2%	7.1%
Haitian Creole	2.6%	1.3%	6.3%
Cape Verdean Creole	1.8%	0.8%	4.4%
Portuguese	1.0%	0.5%	2.4%
Somali	0.8%	0.5%	1.8%
Other ³	3.9%	1.3%	11.1%
Mobile ⁴	9.1%	9.1%	9.2%
SWD	17.5%	18.7%	14.0%
Note: ¹ Low-income is defined as eligible for free or reduced price lunch. ² Asian, Black, white and other races do not include students who identified themselves as Latino. ³ The most frequently spoken native language among the "other" category for LEP students in PK is Arabic. There are more native Arabic speakers among LEPs in PK than native Somali speakers. ⁴ Proportion of students who changed schools during the school year. ⁵ Comparing EP and LEP students, differences in student characteristics were statistically significant in terms of: income (p=.000, small effect size); race/ethnicity (p=.000, medium effect size); native language (p=.000, large effect size); and disability (p=.000, minimal effect size).			

English Language Proficiency

The Massachusetts English Proficiency Assessment (MEPA) measures the English proficiency of all LEPs in the state's public schools. It assesses Speaking, Listening, Reading, and Writing. Beginning in SY2009 testing of students begins in Kindergarten. It is conducted yearly.

MEPA results are reported in five performance levels:

- Level 1: A student at this performance level has not yet developed simple written and spoken communication in English.
- Level 2: A student at this performance level has developed simple written and spoken communication in English.
- Level 3: A student at this performance level communicates in English and uses the language in the school context.

- Level 4: A student at this performance level is moderately fluent in English and uses the language in the school context with few or minor errors.
- Level 5: A student at this performance level communicates effectively in English in the school context with few errors.

In BPS, the largest proportion of LEP students in Grades K-3 scored at Levels 3 and 4 of MEPA.

Figure 2. English Proficiency Levels of LEP Enrollment. BPS MEPA Test-takers Grades K-3, SY2009

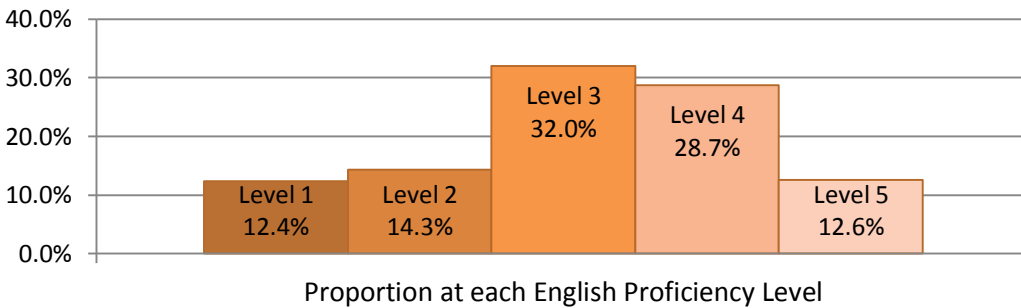


Table 7. Individual Characteristics of LEP Students at Different MEPA Performance Levels. Grades K-3. BPS, SY2009

	All MEPA Test-takers Gr K-3	MEPA Performance Level		
		Levels 1 & 2	Level 3	Levels 4 & 5
Total Enrollment	4,040	1,081	1,292	1,667
Male	51.5%	57.7%	52.9%	46.4%
Low-income ¹	91.6%	91.5%	92.6%	90.8%
Race ²				
Asian	16.8%	13.9%	14.8%	20.2%
Black	13.6%	13.6%	13.7%	13.5%
Latino	64.4%	67.1%	67.3%	60.4%
White	4.2%	4.2%	3.4%	4.9%
Other ³	0.9%	1.2%	0.5%	0.9%
Native Language				
Spanish	59.0%	62.3%	60.9%	55.3%
Chinese dialects	6.2%	6.5%	7.5%	4.9%
Vietnamese	4.5%	6.2%	3.8%	4.0%
Haitian Creole	8.4%	7.4%	5.9%	10.9%
Cape Verdean Creole	7.5%	5.9%	7.8%	8.2%
Portuguese	2.0%	1.8%	1.9%	2.3%
Somali	1.7%	0.9%	1.7%	2.2%
Other	10.8%	9.1%	10.5%	12.2%
Mobile ³	7.0%	15.4%	5.3%	2.9%
SWD ⁴	13.3%	15.6%	18.9%	7.6%

Note: ¹ Low-income is defined as eligible for free or reduced price lunch. ² Asian, Black, white and other races do not include students who identified themselves as Latino. ³ Includes Pacific Islander, Native American and Multiracial. ⁴ Proportion of students who changed schools during the school year. ⁴ SWD includes Grades K-3 only.

Among ELLs Grades K-3 scoring at MEPA Levels 1 and 2, most are male, low-income, Latino, and native Spanish speakers. Students at this level of language proficiency have the highest rates of mobility (15.4%, over 5 times the mobility rate of students scoring at MEPA Levels 4 and 5).

Among ELLs Grades K-3 scoring at MEPA Level 3, most are male, low-income, Latino, and native Spanish speakers. Students at this level of language proficiency have the highest rates of being identified as having a disability (18.9%).

Among ELLs Grades K-3 scoring at MEPA Levels 4 and 5, most are female and most are low-income, Latino, and native Spanish speakers, though less so than students at the other MEPA levels. Students at this level of language proficiency have the lowest rates of mobility and disability.

Characteristics of Students from Different Language Groups

Native Spanish speakers

- are by far the most numerous language group among ELLs in Boston (2,983): 57.8% of Boston's ELLs are native Spanish speakers.
- show among the highest rate of poverty of all groups: higher than BPS average, higher than EP students, higher than all language groups except Somali.
- show lower mobility rates than the overall BPS enrollment, than EP enrollment as well as that of most other language groups with the exception of other long-standing immigrant groups such as Chinese, Vietnamese, and Portuguese.
- have the highest rate of disability among all the language groups considered here, but one that is lower than that of EP students and the BPS average.
- A slightly higher proportion of Spanish speakers than of other ELL language groups (except for native speakers of Cape Verdean Creole) are found at the lower levels of English proficiency as measured by MEPA

Table 8. Characteristics of ELLs' Native Language Groups, PK-3. BPS, SY2009

Characteristics of Schools	N of LEPs ¹	Characteristics of LEPs						
		% Male	% Low Income ²	% Mobile	% SWD ³	English Proficiency Level ^{1,3}		
						% MEPA Levels 1 & 2	% MEPA Level 3	% MEPA Levels 4 & 5
ALL BPS	19,708	52.5%	78.9%	10.1%	17.5%	26.8%	32.0%	41.3%
EP	14,549	52.8%	75.0%	10.3%	18.7%	NA		
All LEPs	5,159	51.6%	89.9%	9.5%	14.0%	26.8%	32.0%	41.3%
Spanish	2,983	51.1%	93.7%	8.6%	16.6%	28.3%	33.0%	38.7%
Chinese languages	424	59.7%	85.6%	8.0%	11.8%	23.7%	22.5%	53.8%
Vietnamese	411	52.8%	83.2%	4.9%	9.8%	21.2%	33.4%	45.4%
Haitian Creole	318	50.3%	84.3%	15.4%	9.0%	28.1%	39.0%	32.9%
Cape Verdean Creole	232	50.0%	89.7%	13.8%	6.6%	36.8%	26.9%	36.3%
Portuguese	125	44.0%	84.8%	7.2% ⁴	12.3%	23.2%	29.3%	47.6%
Somali	88	56.8%	97.7%	22.7%	13.6%	14.7%	32.4%	52.9%
Other ⁵	578	49.7%	81.5%	11.8%	11.3%	22.4%	31.1%	46.5%

Note: ¹ N of LEPs is not equal to the N of LEP MEPA test-takers in this table. ² Low-income is defined as eligible for free or reduced price lunch. ³ SWD and MEPA data include Grades K-3 only; MEPA is not tested in PK. ⁴ Represents n<10. ⁵ Among LEPs, this group includes at least 45 different languages, with Arabic being the most frequently spoken language (12.3% of all "other" language).

Speakers of Chinese languages

- are the second most numerous language group among ELLs in Boston (424): 8.2% of Boston's ELLs are native speakers of Chinese languages.
- show the highest proportion of males of any group considered here.
- show a higher rate of poverty than is average for BPS and a higher rate than that found among EP students. But the rates of poverty among native speakers of Chinese dialects are lower than those of other language groups except Vietnamese, Portuguese, and Haitian Creole speakers.
- show lower mobility rates than the overall BPS enrollment, EP enrollment, and other language groups with the exception of Vietnamese and Portuguese.
- Native speakers of Chinese languages have the highest proportion of students at the highest levels of English proficiency (53.8%).

Vietnamese Speakers

- are the third most numerous language group among ELLs in Boston (411): 8.0% of Boston's ELLs are native speakers of Vietnamese.
- show a higher rate of poverty than is average for BPS and a higher rate than that found among EP students. But the rates of poverty among Vietnamese speakers are lowest of all language groups considered here.
- show the lowest mobility rate of any of the groups considered here.
- The largest proportion of Vietnamese speakers are at the highest level of English proficiency.

Speakers of Haitian Creole

- are the fourth most numerous language group among ELLs in Boston (318): 6.2% of Boston's ELLs are native Haitian Creole speakers.
- have among the highest proportions of female students.
- show a higher rate of poverty than is average for BPS and a higher rate than that found among EP students but a lower rate than the average for LEP students.
- show very high mobility rates: higher than the average for BPS, for EP students, and for LEP students. It is second only to the very high mobility rate of Somali students.
- the largest proportion of Haitian Creole speakers are at middle level (Level 3) of English proficiency as measured by MEPA.

Cape Verdean Creole speakers

- are the fifth most numerous language group among ELLs in Boston (232): 4.5% of Boston's ELLs are Cape Verdean Creole speakers.
- have a higher proportion of female students than all other groups considered here with the exception of Portuguese.
- show a higher rate of poverty than is average for BPS, a higher rate than that found among EP students and a higher rate than most other language groups with the exception of native speakers of Spanish and Somali.
- show a high rate of mobility (13.8%); only native Haitian Creole and Somali speakers change schools more often.
- have the lowest rate of disability among all the language groups considered here.
- Cape Verdean Creole speakers are concentrated at the highest and the lowest levels of English proficiency.

Portuguese speakers

- are the sixth most numerous language group among ELLs in Boston (125): 2.4% of Boston's ELLs are Portuguese speakers.
- have the highest proportion of female students of all language groups considered here.
- show a higher rate of poverty than is average for BPS and a higher rate than that found among EP students but a lower rate of poverty than is found among most LEP language groups.
- show a low rate of mobility: lower than is average for BPS or found among EP students and lower than found among LEP language groups (with the exception of Vietnamese speakers).
- Portuguese speakers are concentrated at the highest levels of English proficiency.

Somali speakers

- are the seventh most numerous language group among ELLs in Boston (88): 1.7% of Boston's ELLs are Somali.
- have one of the highest proportions of male students (56.8%), second only to speakers of Chinese languages.
- show the highest rate of poverty of any group considered here: 97.7% of Somali ELLs in Grades PK-3 come from low income families.
- show the highest rate of mobility of any group considered here: 22.7% of Somali students changed schools during SY2009.
- Somali speakers are concentrated at the highest levels of English proficiency.

III. What are the characteristics of schools and programs in which ELLs in PK-Gr 3 are enrolled? Is there a difference between the pattern of enrollment of ELLs and that of EP students?

Tables 9 and 10 present the characteristics of schools where BPS students, English proficient students and LEP students are enrolled. We present first the comparison between these 3 groups for all students in PK-Grade 3. Then the data are disaggregated for those in Pre-Kindergarten and those in Kindergarten to Grade 3. The school characteristics considered are grade configuration, school type, school size, the proportion of students in the school who are in poverty or LEP, the accountability status for the school and the indicators of teacher qualifications available.

Grade Configuration: Most (71.8%) of LEPs in Grades PK-3 are enrolled in elementary (PK-5 or K-5) schools in BPS. The same pattern is observable when the ELLs are disaggregated along grade level (Table 9). Regardless of grade level, the differences between LEP and EP students along this variable are statistically significant (but the effect sizes are very small).

School Type: Nearly all LEP students (92.8%) are enrolled in district schools compared to 89.2% of English proficient students; this is also the case when ELLs are disaggregated according to grade level. The differences at each grade level between LEP and EP students along this variable are statistically significant (but the effect sizes are minimal)

School Size: The largest proportion (35.6%) of LEPs is enrolled in small schools, a proportion which is much lower than the 51.6% of EP students enrolled in small schools. Among ELLs in PK, the proportion enrolled in small schools (49.0%) is lower but more comparable to that of English proficient students (56.0%). These differences at each grade level between ELLs and EP students are statistically significant (but the effect size is minimal).

School Poverty Status: Most (90.0%) of LEPs are enrolled in schools where over 75% of the students are low-income whereas 73.8% of EPs are enrolled in these types of schools. This pattern is also observable when ELL students are disaggregated by grade level. The differences between LEPs and EPs at each grade level are statistically significant (but the effect size is small).

LEP Density: About half (48.9%) of LEP students are enrolled in schools where 30.1-50% of the student body is of limited English proficiency; an additional 19.5% are enrolled in schools in which over half of all students are of limited English proficiency. This pattern is also observable when ELL students are disaggregated by grade level. Using Orfield and Lee's (2005) categories of segregation in school settings we can determine that although about 20% of ELLs attend schools where there is a concentration of LEPs students, there does not appear to be any evident segregation of ELLs at these grade levels.

Accountability Status: Only 31.3% of ELLs are enrolled in schools that met AYP in ELA and just 14.6% enrolled in schools that met AYP in Math. While most EP students are also not enrolled in schools that met AYP, the proportion is lower. The same pattern is observable among students in K-3 in both Math and ELA and in PK in ELA (a slightly higher proportion of LEPs in PK (24%) are enrolled in schools that met AYP in Math). The differences between LEP and EP students, at all grade levels, along these variables are statistically significant (but the effect size is small).

Teacher Qualifications: The majority (73.3%) of LEP students are enrolled in schools with a proportion of teachers licensed in their teaching assignment above the district average. The majority (80.1%) of LEP students are also enrolled in schools whose proportion of core academic classes taught by a highly qualified teacher is above the district average. These proportions are nearly equivalent to those of EP students (differences were not statistically significant). The same patterns are present among students in PK and K-3 students.

Table 9. Description of Schools, Grades PK-3. BPS, SY2009

	N of Schools	EP ⁴	LEP ⁴
<i>Total Schools and Enrollment</i>	86	14,549	5,159
Grade configuration			
PK-1	5	3.7%	6.8%
Elementary	62	77.2%	71.8%
K-8	17	18.7%	21.4%
K-12	2	0.5%	0.1%
Type			
District	77	89.7%	92.8%
Pilot	9	10.3%	7.2%
Size			
Large (>= 600 students)	10	17.9%	29.4%
Medium (350-599 students)	22	30.5%	34.9%
Small (<350 students)	54	51.6%	35.6%
Poverty rate			
Poverty rate 25-75%	25	26.2%	10.0%
Poverty rate >75%	61	73.8%	90.0%
LEP density			
0-10%	29		6.7%
10.1-30%	30		24.8%
30.1-50%	22		48.9%
>50%	5		19.5%
Accountability status			
Met AYP in ELA	40	46.0%	31.3%
Met AYP in Math	26	25.3%	14.6%
Teacher qualifications			
% of teachers licensed in teaching assignment, above district average ^{1,2}	68	73.8%	73.3%
% of core academic classes taught by highly qualified teachers, above district average ^{1,3}	69	79.1%	80.1%
Note: ¹ The district average includes Grades PK-12. ² District average is 97.9%. ³ District average is 95.9%. ⁴ Differences in the enrollment of EP and LEP students were found to be statistically significant with respect to the following school characteristics: grade configuration (p=.000, minimal effect size); school type (p=.000, minimal effect size); school size (p=.000, small effect size); poverty rate (p=.000, small effect size); AYP ELA (p=.000, small effect size); and AYP Math (p=.000, small effect size).			

Table 10. Description of Schools, Grade PK and K-Grade 3. BPS, SY2009

	PK			K-3		
	N of Schools	EP ⁴	LEP ⁴	N of Schools	EP ⁵	LEP ⁵
<i>Total Schools and Enrollment</i>	71	1,932	717	86	12,617	4,442
Grade configuration						
PK-1	5	8.9%	22.5%	5	2.9%	4.2%
Elementary	51	71.3%	62.5%	62	78.1%	73.3%
K-8	14	18.8%	15.1%	17	18.6%	22.4%
K-12	1			2	0.4%	0.1%
Type						
District	63	85.6%	92.1%	77	90.4%	92.9%
Pilot	8	14.4%	7.9%	9	9.6%	7.1%
Size						
Large (>= 600 students)	9	18.4%	22.2%	10	17.8%	30.6%
Medium (350-599 students)	18	25.6%	28.9%	22	31.3%	35.9%
Small (<350 students)	44	56.0%	49.0%	54	50.9%	33.5%
Poverty rate						
Poverty rate 25-75%	19	31.7%	12.6%	25	25.4%	9.6%
Poverty rate >75%	52	68.3%	87.4%	61	74.6%	90.4%
LEP density						
0-10%	23		5.3%	29		6.9%
10.1-30%	25		29.4%	30		24.1%
30.1-50%	20		49.9%	22		48.8%
>50%	3		15.3%	5		20.2%
Accountability status						
Met AYP in ELA	34	50.6%	33.8%	40	45.3%	30.9%
Met AYP in Math	20	30.5%	24.4%	26	24.5%	13.0%
Teacher qualifications						
% of teachers licensed in teaching assignment, above district average ^{1, 2}	56	73.3%	78.2%	68	73.9%	72.5%
% of core academic classes taught by highly qualified teachers, above district average. ^{1, 3}	57	79.6%	79.5%	69	78.6%	79.9%

Note: ¹ The district average includes Grades PK-12. ² District average is 97.9%. ³ District average is 95.9%.

⁴ Differences in the enrollment of EP and LEP students were found to be statistically significant with respect to the following school characteristics: grade configuration (p=.000, small effect size); school type (p=.000, minimal effect size); school size (p=.005, minimal effect size); poverty rate (p=.000, small effect size); AYP ELA (p=.000, small effect size); AYP Math (p=.002, minimal effect size); and percent of teachers licensed in teaching assignment (p=.009, minimal effect size). ⁵ Differences in the enrollment of EP and LEP students were found to be statistically significant with respect to the following school characteristics: grade configuration (p=.000, minimal effect size); school type (p=.000, minimal effect size); school size (p=.000, small effect size); poverty rate (p=.000, small effect size); AYP ELA (p=.000, minimal effect size); and AYP Math (p=.000, minimal effect size).

Programs in which ELLs in Grades PK-3 are Enrolled

After a determination that the student is a student of limited English proficiency, the Boston Public Schools offers several options for placement: Sheltered English Immersion (SEI) programs, both Language Specific and Multilingual; Two-Way Bilingual programs; programs for Students with

Interrupted Formal Education (SIFE), also both Language Specific and Multilingual; and Transitional Bilingual Education programs. A description of these programs appears in Appendix 1.

Alternatively, LEP students can also be placed in general education programs if their parents prefer full immersion in English for their children, if ELL programs are full or unavailable in the school where the student is placed. ELL students in general education programs should be provided with language support, if needed. The absence of this language support for LEP students in general education programs was the focus of a September 2010 settlement agreement between the district and the U.S. Departments of Justice and of Education, compelling the district to address inadequacies in the provision of services to English language learners (U.S. Department of Justice, 2010).

In SY2009, 54.9% of all ELLs in PK-3 were enrolled in ELL programs, a proportion somewhat lower than the overall enrollment of ELLs in programs, which stands at 59.6% (Uriarte et al., 2011).² Among ELLs in PK, the proportion is somewhat lower at 49.9%, indicating a slight majority of Pre-Kindergarten ELLs are being placed in general education programs and also showing a 10-point difference between the overall program enrollment of ELLs in the district and that of ELLs in the lower grades.

Most ELLs in Grades PK to 3 were enrolled in SEI programs (48.4% of all LEPs, 88.1% of LEPs in ELL programs). A lower proportion of ELLs in PK were enrolled in SEI (42.7% of all LEPs and 85.5% of LEPs in ELL programs) and a higher proportion were enrolled in Two-Way Bilingual programs than was the case among ELLs in K-3.

Among ELLs in PK-3 who were enrolled in SEI programs, the large majority (87.6%) were enrolled in an SEI Language Specific program. In this case again, PK ELLs show a different pattern with much lower enrollments in Language Specific ELL programs and four times proportion of enrollment in Multilingual SEI programs than ELLs in K-3.

Table 11. Programs in which ELLs are Enrolled, Grades PK-3. BPS, SY2009

	ALL PK-3 ¹		PK ²		K-3	
	N	%	N	%	N	%
Not in ELL Program	2,328	45.1%	359	50.1%	1,969	44.3%
In ELL Program	2,831	54.9%	358	49.9%	2,473	55.7%
a. All SEI	2,495	48.4%	306	42.7%	2,189	49.3%
b. Two-Way Bilingual	324	6.3%	52	7.3%	272	6.1%
c. SIFE	12	0.2%			12	0.3%
All SEI	2,495	100%	306	100%	2,189	100%
SEI Multilingual	282	11.3%	105	34.3%	177	8.1%
SEI Language Specific	2,186	87.6%	201	65.7%	2,012	91.9%
SEI Spanish	1,460	58.5%	123	40.2%	1,337	61.1%
SEI Chinese	283	11.3%	28	9.2%	255	11.7%
SEI Haitian Creole	155	6.2%	21	6.9%	134	6.1%
SEI Vietnamese	141	5.7%	21	6.9%	120	5.5%
SEI Cape Verdean Creole	96	3.9%			96	2.2%
SEI Portuguese	51	2.0%	8	2.6%	43	2.0%
SEI Somali	27	1.1%			27	0.6%

Notes: ¹ There are no PK-3 ELLs enrolled in TBE in BPS. Among students in SIFE, students are enrolled in either SIFE Spanish or SIFE Haitian Creole; the numbers are too few to display in this table. ² In BPS, there are no ELLs in PK enrolled in TBE, SIFE, SEI Cape Verdean Creole, or SEI Somali programs.

Table 12. English Proficiency Levels of MEPA Test-Takers in ELL Programs, K-3. BPS, SY2009

	% All MEPA Test-Takers	MEPA Levels 1 & 2	MEPA Level 3	MEPA Levels 4 & 5
K-3				
All MEPA Test-Takers	4,040	1,083	1,293	1,669
Not in ELL Program	43.6%	27.1%	43.0%	54.8%
In ELL Programs	56.4%	72.9%	57.0%	45.2%
a. In SEI	49.6%	65.9%	49.3%	39.4%
b. In Two-Way Bilingual	6.4%	6.6%	7.4%	5.6%
c. In SIFE	0.3%	0.5% ¹	0.2% ¹	0.2% ¹
Note: ¹ Represents n<10.				

Table 12 presents the program participation of K-3 ELL students at different levels of English proficiency. The data show that the majority of students of low English proficiency participate in ELL programs and that the proportion appropriately diminishes as students acquire proficiency and move on to general education programs. Nevertheless, 27.1% of ELLs at MEPA Levels 1 and 2 and 43.0% of those at MEPA Level 3 are not in programs designed for English language learners.

IV. What are the pass rates of ELLs in the Grade 3 ELA and Math tests of the Massachusetts Comprehensive Assessment System (MCAS)? How have these rates changed between SY2006 and SY2011?

The tests of the Massachusetts Comprehensive Assessment System (MCAS), established as part of the Massachusetts Educational Reform Act of 1993, have been the most prevalent measure of academic achievement in Massachusetts for more than a decade (Commonwealth of Massachusetts, 1993). The MCAS is used to meet state and federal requirements for the yearly assessment of progress in academic areas on the part of all students, including LEP students. The state requires that this assessment of the academic achievement of students of limited English proficiency be conducted using a standardized test in English. MCAS tests English Learners in ELA and Math beginning in Grade 3 (Massachusetts Department of Education, 2008).

MCAS pass rates in both ELA and Math have improved substantially between SY2006 and SY2011 for all BPS Grade 3 students, but particularly among ELLs. A sharp improvement is observed among ELLs beginning in SY2009, when pass rates increase 14 points in ELA and 16 points in Math between SY2009 and SY2010. By 2011, ELLs in Boston had higher outcomes in ELA than ELLs statewide (See Appendix 2 for statewide MCAS ELA and Math outcome data).

By 2011, MCAS ELA pass rates for ELLs in Grade 3 were slightly below those of English proficient students. But, as Figure 3 shows, gaps between LEP and EP students declined significantly between SY2006 and SY2011. After a rise in the gap in ELA pass rates between SY2006 and SY2008, the gap has steadily declined, reaching a minimal 2 points in SY2010. In Math, gaps have oscillated from year to year but experienced a marked decline (to 0 points) between SY2010 and SY2011.

Table 13. Grade 3 MCAS Pass Rates. BPS, SY2006-SY2011

	SY2006	SY2007	SY2008	SY2009	SY2010	SY2011
MCAS ELA						
All BPS	78%	78%	74%	76%	82%	80%
EP	81%	81%	77%	80%	83%	81%
LEP	69%	66%	60%	67%	81%	77%
EP/LEP Gap	12	15	17	13	2	4
MCAS Math						
All BPS	66%	67%	68%	67%	76%	77%
EP	68%	70%	69%	69%	76%	77%
LEP	60%	58%	64%	60%	76%	77%
EP/LEP Gap	8	12	5	9	0	0
Notes: Data for all BPS and LEP students in this table are from MDESE (see http://profiles.doe.mass.edu/state_report/mcas.aspx); EP data were calculated from these data. Prior to 2007, Grade 3 students were tested in Reading. Since 2007, Grade 3 students are tested in the ELA (English Language Arts) exam with the following reporting categories: Language; and Reading and Literature.						

During SY2009, Massachusetts moved from “passing” to “proficiency” as the desired measure of achievement. Table 14 presents the Grade 3 MCAS proficiency rates showing much lower rates but steady improvement in outcomes during the period of observation. But, using proficiency as a measure, the gap between EP and LEP students remains relatively the same across time in ELA and declines slightly in Math.

Table 14. Grade 3 MCAS Proficiency Rates. BPS, SY2006-SY2011

	SY2006	SY2007	SY2008	SY2009	SY2010	SY2011
MCAS ELA						
All BPS	30%	32%	29%	31%	37%	36%
EP	34%	36%	32%	34%	43%	41%
LEP	19%	17%	18%	21%	28%	27%
EP/LEP Gap	15	19	14	13	15	14
MCAS Math						
All BPS	30%	36%	36%	33%	42%	41%
EP	33%	39%	37%	33%	45%	43%
LEP	25%	27%	31%	29%	39%	39%
EP/LEP Gap	8	12	6	4	6	4
Note: Data for all BPS and LEP students in this table are from MDESE (see http://profiles.doe.mass.edu/state_report/mcas.aspx); EP data were calculated from these data. Prior to 2007, Grade 3 students were tested in Reading. Since 2007, Grade 3 students are tested in ELA (English Language Arts) exam with the following reporting categories: Language; and Reading and Literature.						

V. What are the Grade 3 MCAS ELA and Math pass rates of ELLs at different levels of English proficiency? Of different demographic characteristics? And in different types of programs?

In comparing the outcomes of ELLs with those of other student populations, it is important to understand the impact of language proficiency in the test scores of LEP students. Uriarte et al. (2011) showed that among elementary school students, language proficiency was a key predictor of MCAS outcomes.

Table 15 presents the Grade 3 MCAS ELA and Math pass rates for English proficient students and ELLs, the latter also disaggregated by English proficiency level. The data show that ELLs at MEPA Levels 1, 2, and 3 perform very poorly on the MCAS, as can be expected given their level of English proficiency. MCAS, a test in English, is not an appropriate measure of either reading or Math skills for this population.

By the time ELLs reach MEPA Levels 4 and 5, their testing outcomes are a more accurate measure of their achievement. In SY2009, ELLs at Levels 4 and 5 of MEPA performed well, scoring higher pass rates than EP students in both ELA and Math.

Table 15. Grade 3 MCAS ELA and Math Pass Rates by MEPA Performance Level. BPS, SY2009

	MCAS ELA Pass Rate	MCAS Math Pass Rate
EP	78.9%	66.7%
LEP ¹	64.3%	56.2%
MEPA Level 1	3.3% ²	3.5% ²
MEPA Level 2	8.7% ²	15.8%
MEPA Level 3	37.6%	32.0%
MEPA Level 4	81.7%	72.6%
MEPA Level 5	99.3%	94.5%

Note: ¹ Data in this table are from the database provided by BPS to the research team. MDESE data show LEP student pass rates of 66% for ELA and 60% for Math. ² Represents n<10.

Pass Rates of Students of Different Individual Characteristics

Tables 16 and 17 show the pass rates in ELA and Math of English proficient students and ELLs of different characteristics (the latter disaggregated by MEPA performance level). In conducting the comparison between LEP and EP students, we compare only those ELLs at Levels 4 and 5 (although the pass rates for all performance levels are shown). We find that:

- ELA and Math pass rates of both **male and female students** are higher among ELLs at MEPA Levels 4 and 5 than among EP students. In all cases, differences between EP students to LEP students scoring at MEPA Levels 4 and 5 were statistically significant although the effect size was minimal.
- ELA and Math pass rates of **low income students** are higher among ELLs at MEPA Levels 4 and 5 than among EP students. ELA pass rates of students who are not low income are higher among English proficient students, while Math pass rates are lower in the same comparison. Differences between EP students to LEP students scoring at MEPA Levels 4 and 5 were statistically significant although the effect size was minimal.
- Across all racial groups, except white, ELA and Math pass rates are higher among ELLs at MEPA Levels 4 and 5 than among EP students.

- Across all native language groups except Vietnamese, ELA and Math pass rates are higher among ELLs at MEPA Levels 4 and 5 than among EP students from those language groups. In the case of Portuguese, Math pass rates are lower for ELLs at MEPA Levels 4 and 5 than among EP students from that language group.
- ELA and Math pass rates of **mobile students**, i.e., students who switched schools during the school year, are higher among ELLs at MEPA Levels 4 and 5 than among EP students. The same is true among students who are not mobile. The differences were not statistically significant.
- ELA and Math pass rates of **students with disabilities** are higher among ELLs at MEPA Levels 4 and 5 than among EP students. The same is true among students who are not disabled. The differences were statistically significant, but effect sizes were small.

Table 16. Grade 3 MCAS ELA Pass Rates by MEPA Performance Level and Individual Student Characteristics. BPS, SY2009

	EP ⁴	All LEPs	MEPA Performance Level (MCAS/MEPA Test-Takers)		
			Levels 1 & 2	Level 3	Levels 4 & 5 ⁴
ALL	78.9%	64.3%	7.1% ⁵	37.6%	85.8%
Gender					
Male	75.8%	60.3%	5.9% ⁵	36.1%	84.2%
Female	82.2%	68.6%	9.7% ⁵	39.3%	87.2%
Income					
Low-income ¹	76.2%	64.2%	6.6% ⁵	38.5%	85.7%
Not low income	88.4%	65.5%	-	23.5% ⁵	86.0%
Race ²					
Asian	91.6%	78.7%	10.0% ⁵	37.0%	91.9%
Black	75.3%	65.9%	15.4% ⁵	46.9%	89.5%
Latino	77.8%	59.2%	3.5% ⁵	33.7%	82.4%
White	88.4%	69.4%	-	58.3% ⁵	83.9%
Other	76.3%	80.0% ⁵	-	-	-
Native Language					
Spanish	75.6%	58.8%	3.6% ⁵	34.7%	82.0%
Chinese dialects	90.3%	77.9%	-	50.0% ⁵	90.4%
Vietnamese	95.2%	79.7%	-	18.2% ⁵	94.5%
Haitian Creole	65.7%	67.6%	14.3% ⁵	60.0%	91.9%
Cape Verdean Creole	76.7%	54.5%	16.7% ⁵	25.0% ⁵	88.5%
Portuguese	75.0% ⁵	75.0%	-	-	100%
Somali	63.6% ⁵	77.3%	-	-	93.8%
Other	88.6%	72.2%	-	47.6%	84.1%
Mobility ³					
Switched schools	66.7%	37.5%	0%	28.6% ⁵	70.6%
Did not switch schools	79.7%	65.6%	8.0% ⁵	38.1%	86.2%
Disability ⁴					
Not SWD	86.1%	69.6%	6.8% ⁵	40.7%	86.4%
SWD	52.6%	39.3%	7.5% ⁵	30.1%	78.8%

Note: Dashes indicate that data have been suppressed because n of test-takers <10. ¹ Low-income is defined as eligible for free or reduced price lunch. ² Asian, Black, white and other races do not include students who identified themselves as Latino. "Other" includes Pacific Islander, Native American, and Multiracial students. ³ Proportion of students who changed schools during the school year. ⁴ Comparing EP students to LEP students scoring at MEPA Levels 4 and 5, the difference in MCAS ELA pass rates was found to be statistically significant among: male (p=.001, minimal effect size); female (p=.029, minimal effect size); low-income

(p=.000, minimal effect size); Black (p=.002, medium effect size); Haitian Creole speakers (p=.006, medium effect size) ; and SWD students (p=.000, small effect size). ⁵ Represents n<10.

Table 17. Grade 3 MCAS Math Pass Rates by MEPA Performance Level and Individual Student Characteristics. BPS, SY2009

	EP ⁵	All LEPs	MEPA Performance Level (MCAS/MEPA Test-takers)		
			Levels 1 & 2	Level 3	Levels 4 & 5 ⁵
ALL	66.7%	56.2%	10.5%	32.0%	77.7%
Gender					
Male	66.8%	56.3%	11.2%	36.2%	80.1%
Female	66.6%	56.1%	9.1% ⁵	27.4%	75.4%
Income					
Low-income ¹	63.0%	55.6%	10.7%	31.3%	77.4%
Not low income	79.3%	62.8%	9.1% ⁵	43.8% ⁵	80.4%
Race ²					
Asian	89.8%	85.6%	46.2% ⁵	67.9%	93.4%
Black	58.8%	49.5%	8.9% ⁵	40.8%	73.7%
Latino	65.7%	50.1%	5.9% ⁵	24.2%	73.2%
White	84.3%	55.1%	-	45.5% ⁵	71.0%
Other ³	66.0%	50.0% ⁴	-	-	-
Native Language					
Spanish	70.5%	50.1%	6.0% ⁵	25.1%	73.5%
Chinese dialects	93.5%	87.8%	-	78.6%	95.9%
Vietnamese	90.9%	81.9%	-	58.3% ⁵	89.1%
Haitian Creole	67.6%	50.0%	16.7% ⁵	45.0% ⁵	72.2%
Cape Verdean Creole	60.0%	40.0%	3.8% ⁵	43.8% ⁵	70.4%
Portuguese	92.3%	65.0%	-	-	91.7%
Somali	58.3% ⁵	59.1%	-	-	81.3%
Other	75.0%	57.6%	-	33.3% ⁶	72.1%
Mobility ³					
Switched schools	51.9%	26.0%	3.1% ⁵	28.6% ⁵	72.2%
Did not switch schools	67.7%	58.5%	12.9%	32.2%	77.8%
Disability					
Not SWD	73.9%	60.9%	12.1%	34.3%	78.8%
SWD	40.1%	33.0%	7.1% ⁵	26.5%	65.4%

Note: Dashes indicate that data have been suppressed because n of test-takers <10. ¹ Low-income is defined as eligible for free or reduced price lunch. ² Asian, Black, white and other races do not include students who identified themselves as Latino. "Other" includes Pacific Islander, Native American and Multiracial students. ³ Proportion of students who changed schools during the school year. ⁴ Comparing EP students to LEP students scoring at MEPA levels 4 and 5, the difference in MCAS Math pass rates was found to be statistically significant among: Male (p=.000, small effect size); female (p=.002, minimal effect size); Low-income (p=.000, small effect size); White (p=.054, minimal effect size); Black (p=.002, minimal effect size); Latino (p=.009, minimal effect size); SWD (p=.000, small effect size); and not SWD students (p=.017, minimal effect size). ⁵ Represents n<10.

Pass Rates of ELLs in Different ELL Programs

Table 18 examines the MCAS pass rates of LEP students at different levels of English proficiency and in different educational programs. Among students in Levels 1 and 2, ELA pass rates are higher for students not in ELL programs than for those in ELL programs while the opposite is true in Math. Among students at MEPA performance Level 3, students in Two-Way Bilingual programs outperform those in other programs. For students at Levels 4 and 5, those not in ELL programs have the highest pass rates in ELA and those in Two-Way Bilingual programs have the highest pass rates in Math.

Table 18: Grade 3 MCAS ELA Pass Rates of ELLs in Different ELL Programs. BPS, SY2009

	ALL LEPs	English Proficiency Level (MEPA Performance Levels)		
		% Levels 1 & 2	% Level 3	% Levels 4 & 5 ^{3,4}
	MCAS ELA Pass Rates			
EP	78.9% ³			
ALL LEPs	64.3% ¹	7.1% ²	37.6%	85.8%
Not in ELL Program	74.9%	12.5% ²	40.5%	90.8%
In ELL Programs	54.6%	5.3% ²	35.7%	79.6%
a. In SEI	52.3%	5.8% ²	32.7%	78.8%
b. In Two-Way Bilingual	72.7%	-	57.1%	81.8%
c. In SIFE	41.7% ²	-	-	-
	MCAS Math Pass Rates			
EP	66.7% ⁴			
ALL LEPs	56.2% ¹	10.5%	32.0%	77.7%
Not in ELL Program	65.3%	7.7% ²	31.3%	81.5%
In ELL Programs	48.3%	11.2% ²	32.6%	73.0%
a. In SEI	45.3%	11.9%	29.1%	70.9%
b. In Two-Way Bilingual	71.2%	-	52.4%	81.8%
c. In SIFE	50.0% ²	-	-	-

Note: Dashes indicate that data are suppressed because n of test-takers <10. ¹ MDESE data show a LEP student pass rate of 66% for ELA. ² Represents n<10. ³ Differences in MCAS ELA pass rates were found to be statistically significant when comparing the following groups of students: EPs vs. all LEPs scoring at MEPA Levels 4 and 5 (p=.000, minimal effect size) and EPs vs. all LEPs scoring at MEPA Levels 4 and 5 not enrolled in an ELL program (p=.000, minimal effect size). Among LEP students scoring at MEPA Levels 1 and 2, differences in MCAS ELA pass rates were not found to be statistically significant when comparing students enrolled in different ELL programs. Among LEPs scoring at MEPA Level 3, differences in MCAS ELA pass rates were found to be statistically significant when comparing those enrolled in SEI vs. those enrolled in Two-Way Bilingual programs (p=.032, small effect size). Among LEPs scoring at MEPA Levels 4 and 5, differences in MCAS ELA pass rates were found to be statistically significant when comparing those not enrolled in an ELL program to those enrolled in a Two-Way Bilingual program (p=.032, small effect size). ⁴ Differences in MCAS Math pass rates were found to be statistically significant when comparing the following groups of students: EPs vs. all LEP students scoring at MEPA Levels 4 and 5 (p=.000, minimal effect size); EPs vs. all LEP students scoring at MEPA Levels 4 & 5 not enrolled in an ELL program (p=.000, minimal effect size); EPs vs. all LEPs scoring at MEPA Levels 4 & 5 enrolled in an ELL program (p=.031, minimal effect size); EPs vs. all LEPs scoring at MEPA Levels 4 & 5 enrolled in a Two-Way Bilingual program (p=.034, minimal effect size). Among LEP students scoring at MEPA Levels 1 & 2, differences in MCAS Math pass rates were not found to be statistically significant when comparing students enrolled in different programs. Among LEPs scoring at MEPA Level 3, differences in MCAS Math pass rates were found to be statistically significant when comparing those enrolled in SEI vs. those enrolled in Two-Way Bilingual programs (p=.032, small effect size). Among LEPs scoring at MEPA Levels 4 & 5, differences in MCAS Math pass rates were found to be statistically significant when comparing those not enrolled in ELL programs vs. those enrolled in SEI (p=.003, small effect size).

Notes

¹ The following cases were excluded from the database: (a) Cases with BPS start dates after June 30, 2009. These cases were removed because their start dates were after the end of the study period. (b) Cases enrolled in schools not under the authority of BPS. These schools included schools in other districts, parochial and secular private schools, and SPED schools. Many of these schools had enrollments of fewer than 30 students from our original data pull. (c) Cases whose SIMS codes revealed that the students were not actually enrolled in a given school year. Students who had 0 days of attendance and 1 day of membership (0-1" students) were excluded from the operational database. In SY2009, cases with 1 day of attendance and 1 day of membership were removed for that school year only. (d) Cases with an attendance code of "555" were also removed, as this is the code SIMS uses to indicate summer events (e.g., summer graduation, summer dropouts, and summer transfers).

² This proportion represents a steep decline from just three years previously (in SY2006) when 87.7% of ELLs were enrolled in an ELL program. See Uriarte et al., 2011.

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Appendix 1: Definitions of Variables

Variable	Definition
Demographic Characteristics	
Gender	Gender of student.
Income	We defined low-income status as a student who is eligible for free or reduced price lunch.
Native Language	Language a student has learned from birth. Also known as first language.
Mobility	We defined mobile students as any student who changed schools between October and June of a given school year.
SWD	A student with a disability (SWD) is a student participating in special education programs: full inclusion, partial inclusion, and substantially separate classrooms. We report only on SWDs ages 6+, K-12.
English Proficiency Level	The English proficiency level of LEP students as measured by MEPA in 1 to 4 (SY2006-SY2008) or 1 to 5 (SY2009) categories. The English proficiency level of LEP students is used both as an individual descriptor and as an outcome when discussing progress in English language acquisition.
Program Level Variables	
In ELL Program	Student enrolled in a program for English language learners (and not in a general education program). A student in an ELL program may or may not also be a student with a disability receiving special education services or a student in an alternative education program.
In SEI	Student enrolled in a Sheltered English Immersion program. SEI programs in BPS are of two types: Multilingual (students in these programs speak different languages) or Language Specific (students all speak the same language and support for students and families is available in that language).
In Two-Way Bilingual	Student enrolled in a Two-Way Bilingual program. These are programs where fluent speakers of English and English language learners learn to become bilingual and bi-literate in a second language.
In TBE	Student enrolled in a Transitional Bilingual Education program. Transitional Bilingual Education models promote a gradual reduction of instruction in the primary language as students learn English. This model's major goal is for students to build the capacity to learn solely in English. In BPS, TBE is not offered in the lower grades.
In SIFE	Student enrolled in a program for students with limited and/or interrupted formal education and who do not have the educational skills that are needed to perform grade level academic work. High Intensity Literacy Training is available for SIFE students in language specific programs. Multilingual SIFE programs enroll students from diverse linguistic backgrounds.
Not in Program for ELLs	A LEP student whose parent has opted out of enrolling their child in an ELL program, or, a LEP student who is otherwise not enrolled in an ELL program. A student not enrolled in an ELL program may or may not also be a student with a disability receiving special education services.
School Level Variables	
Grade Configuration	PK to 2; Elementary (K-5), K-8, and K-12
School Size	Size of school enrollment. We used Wasley et al. (2000) to define sizes. In Elementary schools we consider the following categories: Large (≥ 600 students) Medium (350-599 students) Small (<350 students)
School Poverty Rate	Proportion of enrollment that is eligible for a free or reduced price lunch.
Density of LEP students	Percentage of enrollment that is of limited English proficiency (LEP). A LEP is defined by MDESE as "a student whose first language is a language other than English who is unable to perform ordinary classroom work in English." The categories used in this variable were adapted from Orfield and Lee's (2005) categories of segregation in school settings where over 50% concentration of one group – defined by race, poverty status, or language proficiency – represents "predominance," 90% concentration represents an "intensely segregated" school environment and 99% concentration indicated an "extremely segregated" school.

Accountability Status	A school's Adequate Yearly Progress (AYP) data for the selected year. We report on the AYP aggregate for ELA and Math.
Teacher Qualifications	Two teacher qualification variables are analyzed: (1) Percentage of teachers who are licensed with Provisional, Initial, or Professional licensure to teach in the area(s) in which they are teaching (2) The percentage of a school's core academic classes taught by teachers who are highly qualified. These teachers, measured in "full-time equivalency," of core academic classes meet the NCLB definition of highly-qualified. To meet the definition, teachers must hold a valid Massachusetts license <i>and</i> demonstrate subject matter competency in the areas they teach.
Outcome Variables	
English Proficiency Level	See description above.
MCAS Pass Rates in ELA and Math	Pass rates are the sum of the proportions of students scoring in the Advanced, Proficient, and Needs Improvement performance categories in MCAS exams on these subjects in a given grade in a given year.
MCAS Proficiency Rates in ELA and Math	Proficiency rates are the sum of the proportions of students scoring in the Advanced and Proficient performance categories in MCAS exams on these subjects in a given grade in a given year.

Appendix 2: MCAS Pass Rates For Grade 3 Students In Massachusetts

Grade 3 MCAS Pass Rates. MA, SY2006-SY2011

	SY2006	SY2007	SY2008	SY2009	SY2010	SY2011
MCAS ELA						
All MA	92%	91%	89%	90%	92%	91%
EP	93%	92%	90%	92%	94%	93%
LEP	71%	70%	65%	71%	78%	74%
MCAS Math						
All MA	84%	84%	86%	85%	89%	90%
EP	86%	86%	87%	87%	91%	92%
LEP	58%	60%	66%	63%	73%	75%
Note: Data for all BPS and LEP students in this table are from MDESE; EP data were calculated from these data: http://profiles.doe.mass.edu/state_report/mcas.aspx .						

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